REMARKS

The present application includes claims 1-20. Claims 1-20 were rejected by the Examiner. Claim 11 has been amended by this response.

In response to the Examiner's objection to the incorrect deletion of "detected" in claim 11, the Applicant resubmits a corrected amendment of claim 11. Claim 11 has been amended to recite that the remote first terminal generates a remote signal in response to an error reported by the workstation. The Applicant respectfully submits that claims 11-13, as amended, should be allowable.

Claims 1-4, 11-13, and 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Zur (U.S. Patent No. 6,178,225), in view of Allison (U.S. Patent No. 6,094,531), in further view of Kobata (U.S. Patent No. 6,321,348).

Claims 5-10 and 14-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Zur in view of Kobata.

The Applicant first turns to the rejection of claims 1-4, 11-13, and 19-20 under 35 U.S.C. § 103(a) as being unpatentable over Zur, in view of Allison, in further view of Kobata. As previously discussed, Zur very clearly relates to metering x-ray image exposures for billing purposes (Abstract; column 1, lines 43-50). Zur tries to improve billing of users for x-ray services based on charging for usable x-ray images and not charging for x-ray images that cannot be used for diagnosis. A thorough review of Zur

shows that the Zur patent simply does not mention identifying errors, correcting errors, installing software, or updating software.

The "management" of x-ray imaging facilities and services envisioned by Zur is quite clearly a reduction of costs to a user through metering of usable and unusable images and generation of billing output (See Background and Summary, column 1, lines 5-67, column 2, lines 1-67, and column 3, lines 1-3). The "service" center of Zur is a billing service center for generating bills and statements for x-ray imaging customers (column 6, lines 5-17). It is illustrative of the narrow focus of Zur that Zur does not even discuss improving image quality or imaging system performance but, rather, purely focuses on billing and generating usable and unusable exposure reports. In fact, it is difficult to read a paragraph in the Zur patent and not find a mention of *metering* or *billing* for usable images.

The service center of Zur preferably receives usage statistics from metering systems of digital X-ray image facilities via the Internet (column 5, lines 19-29). That is, the service center is accessed by facilities, and the service center then generates bills based on the image usage statistics received from facility metering systems (column 5, lines 30-34). Alternatively, Zur mentions that the service center may electronically poll individual imaging facility metering systems to obtain usage statistics (column 6, lines 42-50). Zur is concerned with accurate and efficient billing of users of x-ray imaging facilities based on an actual number of accepted images as opposed to a total number of images taken.

There is no error correction, error analysis, or software update functionally mentioned or even envisioned in Zur. Zur includes no mention of even an image quality

improvement system or method, let alone a system or method that diagnoses and corrects errors in a picture archiving and communication system itself, such as the system and method claimed in the present application. Thus, Zur is a wholly inappropriate and inapplicable reference upon which to base a rejection of the claimed invention under 35 U.S.C. § 103 or § 102.

As previously discussed, Allison relates to an experimental computer testing platform for testing software on test computers (Abstract; column 2, lines 25-29; column 3, lines 60-67; column 4, lines 10-22). Allison neither mentions nor has any logical relationship to a medical environment or a picture archiving and communication system (PACS), which by definition, and as described in the specification, is a medical system used in a medical environment. Allison makes no mention of error detection or correction.

When software or hardware needs to be tested, Allison looks for an available test machine (column 3, lines 11-27). When a test machine becomes available, the dispatcher machine is notified which machine is available for a test (column 3, lines 23-27). The dispatcher machine determines whether one or more of the tests needed to be run are capable of being performed by the test machine (column 3, lines 28-34). If one or more of the tests are capable of being performed by the test machine, the dispatcher prioritizes the tests and instructs the test machine to perform the test with the highest priority (column 3, lines 32-39). The test machine then performs the test (column 3, lines 39-40). If no test machines are available to perform a test, the dispatcher determines which of the test machines capable of performing the test is executing the lowest priority job (column

7, lines 25-32). Then, the lowest priority job is suspended to allow the higher priority job to be executed (column 7, lines 32-34).

The installer installs an operating system and launcher program on a test machine (column 4, lines 10-12). The launcher program communicates with the dispatcher machine(s) to let the dispatcher machine(s) know that the test machine is available for test (column 4, lines 12-22).

After testing has been completed, the operating system is removed so that another operating system may be installed on the machine for a subsequent test (Figures 4 and 5; column 10, lines 20-23; column 12, lines 32-45). In this way, operation of a new piece of software and/or hardware being developed by a computer manufacturer, such as Hewlett-Packard, may be tested under a variety of different operating systems. The operating systems and software are temporarily installed for testing purposes and then removed or reset to a base state (column 12, lines 40-45).

The Applicant respectfully submits that it is readily apparent from the disclosure of the Allison patent that the Allison patent only discloses a computer and software *testing* system. Allison discusses a prioritized testing system involving a dispatcher machine, installer machine, and a plurality of testing machines with launcher software allowing testing (See Figures 1-5). It would be unreasonable to extend the scope of the Hewlett-Packard patent beyond the computer testing system disclosed.

In the present invention, PACS workstations store valuable data and records and provide software services to users. A system with variable operating system installation followed by a wiping or resetting of information on that system would not be useful in such an environment. Indeed, a PACS system that was continually being reset or

operated in an insecure, experimental mode would be unusable by medical professionals and would undoubtedly fail required safety inspections and regulatory approval.

As previously discussed, Kobata discloses a system for ascertaining the demography of Internet users and providing software or consulting services based on the users' infrastructure data (Abstract; column 1, lines 12-15). This demography data includes "CPU power, hard disk space, applications installed, network connectivity, and log-in history" (Figure 1; column 2, lines 32-34). The Kobata system provides consulting advice to permit installation of peripherals or other personal computer equipment (Abstract; column 1, lines 60-64). The system of Kobata identifies compatibility errors but does not correct errors on its own (Abstract; column 4, lines 11-28). Kobata specifically states that it is important to install client software *at* the individual client site, rather than remotely (column 4, lines 19-24). If an error requires anything other than a standard reinstall or control of the software, an expert consultant is used to analyze and correct the problem (column 4, lines 19-54). Kobata neither mentions nor has any logical relationship to a medical environment or a picture archiving and communication system (PACS), which is a system used in a medical environment.

Kobata is concerned with compatibility issues between computer peripherals and personal computers (column 1, lines 18-41). Although Kobata does disclose remotely identifying problems, it does so based on analysis of user demography data and log-in history (column 1, lines 66-67; column 2, lines 1-51). That is, software serial number and user infrastructure data are used to identify compatibility problems (column 2, lines 30-51). The infrastructure data envisioned by Kobata is listed as software serial number,

CPU information, IP address, CPU information, hard disk space, network connection, inventory or application list, and log-in history (column 3, lines 50-59). The very limited, few-column disclosure of Kobata leaves little room for expansion beyond the stated disclosure.

Thus, Kobata's purpose is to monitor remotely the configuration of personal computers with hardware and software configurations controlled by the end user, and download software or reconfigure individual personal computers to resolve compatibility problems. This purpose is very different from the present invention, which teaches responding to a PACS workstation error reported by a PACS workstation by simultaneously updating or installing new software on a plurality of PACS workstations. Because Kobata is focused on determining installation compatibility problems in personal computers, a person of ordinary skill in the art would not have looked to it in attempting to develop a remote installation and error correction system for a PACS.

The limitations of the pending claims should be examined as a whole in relation to the prior art. The prior art references must also be considered as a whole and must suggest the desirability and thus the obviousness of making the combination. In addition, the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. MPEP 2141; *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1135, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed.Cir. 1986).

Thus, limitations of the pending claims are not literally found in any of the cited references, taken either individually or in any combination. Additionally, the limitations of the pending claims are not obvious in light of any of the cited references, taken either

individually or in any combination. Therefore, the Applicant respectfully submits that the pending claims 1-20 should be allowable.

The Applicant submits that a person of ordinary skill in the art in 1999 would not think to consider an image billing system, such as Zur, or a personal computer testing platform, such as Allison, when developing an error detection and correction system for a picture archiving and communication system in use in a healthcare environment. Rather than being a "generic" installation system, Allison is a very specific testing system for installing an operating system on a testing machine, scheduling a test, and then wiping the test machine to ready it for another test. Furthermore, one of ordinary skill in the art in 1999 would not think to utilize a compatibility-resolution system, such as Kobata, to detect and correct errors or update software in a picture archiving and communication system in use in a medical environment.

Nonetheless, a theoretical combination of these systems would produce some form of an experimental x-ray testing system that includes metering and billing capabilities and compatibility testing capabilities. Such a system is obviously quite different from the system and method described in the pending claims 1-20.

The combination would not teach or suggest a method for remotely enhancing a picture archiving and communication system (PACS) including establishing a network connection with a web-based server and periodically providing software for installation to a plurality of PACS workstations in response to an error detected by one or more of the workstations. These limitations are disclosed in independent claim 1. The combination does not teach or suggest directing the web-based server to simultaneously install the

software to the plurality of PACS workstations and simultaneously installing the software. Although Kobata does relate in some way to errors, its purposes are very different from the present invention. Kobata is directed to analysis of demographic data such as CPU power, disk space, and applications installed to determine if compatibility problems exist and then refer a user to expert consulting services. The present invention relies on the workstation to report errors and corrects errors via the web-based server, while Kobata discovers installation problems (i.e., incompatibilities) based on analysis of broad demographic data at the server. Therefore, the Applicant respectfully submits that independent claim 1 and its dependent claims 2-4 should be in condition for allowance.

The theoretical combination of Zur, Allison, and Kobata does not teach or suggest a system with a remote first terminal remotely monitoring a PACS workstation to generate a remote signal requesting installation of software in response to an error reported by the workstation and a web-based server including an installer for simultaneously installing software to a plurality of PACS workstations responsive to the remote signal. These limitations are recited in claim 11. Rather, Allison installs an operating system in a testing environment in order to test new products. Neither Zur nor Allison discusses errors. Zur, Allison, and Kobata do not install software on a plurality of medical imaging workstations in response to a remote signal monitoring a medical imaging workstation. Kobata does not detect errors in the same way or for the same purposes as the present invention. It looks for compatibility problems based on an analysis of an individual workstation's demography data, such as CPU power, hard disk space, and applications installed. Pending claims disclose locating an error message

reported by the PACS software in a log file, not determination of compatibility problems through expert or artificial intelligence analysis of general demography data. The combination does not teach or suggest generating a remote signal at a first PACS workstation for instructing the web-based server to install software at other PACS workstations on the same system, as recited in claim 12. Thus, the Applicant respectfully submits that claims 11-13 should be allowable.

In addition, the combination of Zur, Allison, and Kobata does not teach or suggest connecting to a web-based server from a remote terminal on the Internet, instructing the web-based server to update pre-existing software on a plurality of PACS workstations in communication with the web-based server, and simultaneously updating the pre-existing software on the plurality of PACS workstations. These limitations are recited in independent claim 19. Rather, Allison discusses an operating system replacement on a test machine or installation of an operating system on a blank test machine for testing purposes only. Additionally, there is no update in Zur, Allison, or Kobata on multiple machines of software that is already on all of the multiple machines. Therefore, the Applicant respectfully submits that claims 19 and 20 should be allowable.

The Applicant now turns to the Examiner's rejection of claims 5-10 and 14-18 under 35 U.S.C. § 103(a) as being unpatentable over Zur in view of Kobata. As discussed in detail above, one of ordinary skill in the art would have no reason to combine the remote demographic analysis system of Kobata with the metering and billing system of Zur. Combining the systems for the sake of argument would either provide a

compatibility analysis of x-ray image billings or provide a metering and billing system to charge users for demographic analysis and compatibility consulting services. Neither combination would teach all of the limitations of amended claims 5-10 and 14-18.

For example, the combination would not teach or suggest identifying an error occurring at one or more PACS workstations based on an error indicator retrieved from one or more files at one or more PACS workstations at a remote terminal in communication with a web-based server. The combination also would not teach or suggest directing updates of special-purpose medical imaging software from a remote terminal. These limitations are recited in independent claim 5 of the present application. Rather, Kobata identifies potential installation problems based on expert or artificial intelligence analysis of demographic data on a personal computer in a general-purpose computing environment. Additionally, Kobata does not disclose a remote terminal, only a client and a server.

Similarly, the combination would not teach or suggest generating a remote signal at a remote terminal in response to an error occurring at a PACS workstation connected to a web-based server, retrieving data from one or more PACS workstations in response to the remote signal, and providing remote identification and correction of an error via the web-based server at one more PACS workstations by updating software stored on one or more PACS workstations. These limitations are recited in independent claim 14. Kobata does not disclose a method for updating multiple clients based on an error detected at one client. Rather, it downloads software to one specific client or refers the client to expert consulting services based on an installation compatibility problem detected by analyzing that client's particular demographic data.

The combination would also not teach or suggest the remote analysis of log data from each of a plurality of PACS workstations in communication with a web-based server to indicate an error at the plurality of PACS workstations and remote correction of the error at the plurality of PACS workstations from a remote terminal using the web-based server. These limitations are recited in independent claim 17. Kobata relies on demography data such as CPU power, disk space, and applications installed, not log data from a special-purpose application.

Therefore, the teachings of claims 5-10 and 14-18 would not have been obvious. Thus, the Applicant respectfully submits that claims 5-10 and 14-18, as amended, should be allowable.

The Examiner has made several statements that, because of the manner in which the statements are worded, could be interpreted as the Examiner asserting Official Notice of the content of the statements. For example, the Examiner asserted that "update installation in response to an error condition being remotely identified" or "error condition detected" is well known in the art (See pages 5, 9, 10, and 12). The Examiner also asserts that "remote detection / correction in networked systems is well known in the art." (See pages 18, 19, 20, and 21).

If the Examiner is asserting Official Notice that the content of these statements are common knowledge, the Applicants respectfully traverse the Examiner's assertions as further set forth below. Alternatively, if the Examiner's assertions are based on the personal knowledge of the Examiner, then under MPEP § 2144.03(C) and 37 C.F.R. §

1.104(d)(2), the Examiner's assertions must be supported by an affidavit from the Examiner.

The Applicant respectfully submits that remote error detection and correction in a PACS system is not well known in the art. The Applicant also submits that "networked systems" is a broad generalization and may not have any relation to the specific context of a picture archiving and communication system, as recited in the claimed invention. The Applicant respectfully submits that the Examiner has performed "a thorough search of the prior art" over the course of two Requests for Continued Examination and numerous Office Actions, as part of the Examiner's obligation in examining the present application under MPEP § 904.02. The Applicant respectfully submits that the cited references found during the Examiner's thorough and detailed search of the prior art are indicative of the knowledge commonly held in the art.

However, in the Examiner's thorough and detailed search of the relevant prior art, none of the prior art taught or suggested the subject matter of the Examiner's assertion of Official Notice. The Applicant respectfully submits that if the subject matter of the Examiner's assertion of Official Notice had been of "notorious character" and "capable of instant and unquestionable demonstration as being well-known" under MPEP § 2144.03(A), then the subject matter would have appeared to the Examiner during the Examiner's thorough and detailed search of the prior art. The Applicant submits that none of these references show that such limitations were well known in the art in 1999 and submits that continued rejections relying upon material that is "well known in the art" without providing concrete reference support or personal affidavit are not provided for under the MPEP or patent case law.

If the Examiner had found any teaching of relevant subject matter, the Examiner would have been obligated to list the references teaching the relevant subject matter and make a rejection. Consequently, the Applicant respectfully submits that the prior art does not teach or suggest the subject matter of the Examiner's assertion of Official Notice and respectfully traverse the Examiner's assertion of Official Notice.
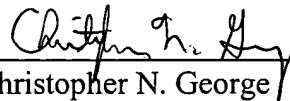
CONCLUSION

The Applicant respectfully submits that the present application is in condition for allowance. The Applicant thanks the Examiner for her work in examining the application and the prior art but respectfully submits that the cited art does not teach or suggest the limitations of the pending claims. The Applicant welcomes a continued dialogue with the Examiner to place the pending claims in condition for allowance. If the Examiner has any questions or the Applicants can be of any assistance, the Examiner is invited and encouraged to contact the Applicants at the number below.

The Commissioner is authorized to charge any necessary fees or credit any overpayment to the Deposit Account of GEMS-IT, Account No. 502401.

Respectfully submitted,

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